

# SEQUENCE LISTING

<110> CHOO, Yen  
KLUG, Aaron  
ISALAN, Mark

<120> Nucleic Acid Binding Proteins

<130> 71278/264975

<140> US 09/424,487

<141> 1999-11-23

<150> GB 9710809.6

<151> 1997-05-23

<150> PCT/GB98/01512

<151> 1998-05-26

<160> 17

<170> PatentIn Ver. 2.1

<210> 1

<211> 264

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<222> (1)..(264)

<220>

<223> Description of Artificial Sequence: encoding  
nucleic acid binding proteins

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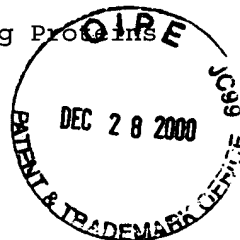
gca gaa gag aag cct ttt cag tgt cga atc tgc atg cgt aac ttc agc	48
Ala Glu Glu Lys Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser	
1 5 10 15	

gat cgt act act ctt acc cgc cac acg agg acc cac aca ggc gag aag	96
Asp Arg Thr Thr Leu Thr Arg His Thr Arg Thr His Thr Gly Glu Lys	
20 25 30	

cct ttt cag tgt cga atc tgc atg cgt aac ttc agc agg agc gat aac	144
Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Arg Ser Asp Asn	
35 40 45	

ctt acg aga cac cta agg acc cac aca ggc gag aag cct ttt cag tgt	192
Leu Thr Arg His Leu Arg Thr His Thr Gly Glu Lys Pro Phe Gln Cys	
50 55 60	

cga atc tgc atg cgt aac ttc agg caa gct gat cat ctt caa gag cac	240
Arg Ile Cys Met Arg Asn Phe Arg Gln Ala Asp His Leu Gln Glu His	
65 70 75 80	



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cta aag acc cac aca ggc gag aag  
 Leu Lys Thr His Thr Gly Glu Lys  
 85

264

<210> 2  
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 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: encoding  
 nucleic acid binding proteins

<400> 2  
 Ala Glu Glu Lys Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser  
 1 5 10 15  
 Asp Arg Thr Thr Leu Thr Arg His Thr Arg Thr His Thr Gly Glu Lys  
 20 25 30  
 Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Arg Ser Asp Asn  
 35 40 45  
 Leu Thr Arg His Leu Arg Thr His Thr Gly Glu Lys Pro Phe Gln Cys  
 50 55 60  
 Arg Ile Cys Met Arg Asn Phe Arg Gln Ala Asp His Leu Gln Glu His  
 65 70 75 80  
 Leu Lys Thr His Thr Gly Glu Lys  
 85

<210> 3  
 <211> 18  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Nucleic acid  
 binding protein

<220>  
 <221> BINDING  
 <222> (1)..(18)  
 <223> where X is any amino acid

<400> 3  
 Xaa Cys Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa His Xaa Xaa  
 1 5 10 15  
 Xaa His

<210> 4  
<211> 21  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: where X is any  
amino acid

<220>  
<221> BINDING  
<222> (1)..(21)

<400> 4  
Xaa Cys Xaa Xaa Cys Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa  
1 5 10 15

His Xaa Xaa Xaa His  
20

<210> 5  
<211> 26  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Consensus zinc  
finger structure

<220>  
<221> BINDING  
<222> (1)..(26)

<400> 5  
Pro Tyr Lys Cys Pro Glu Cys Gly Lys Ser Phe Ser Gln Lys Ser Asp  
1 5 10 15

Leu Val Lys His Gln Arg Thr His Thr Gly  
20 25

<210> 6  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Consensus  
zinc finger structure

<220>  
<221> BINDING  
<222> (1)..(29)

<400> 6  
Pro Tyr Lys Cys Ser Glu Cys Gly Lys Ala Phe Ser Gln Lys Ser Asn

1

5

10

15

Leu Thr Arg His Gln Arg Ile His Thr Gly Glu Lys Pro  
20 25

&lt;210&gt; 7

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: where x  
denotes a given combination of the bases at  
interface between DNA subsites, and the four bases  
are equally represented at DNA position 3

&lt;220&gt;

&lt;221&gt; BINDING

&lt;222&gt; (1)..(9)

&lt;400&gt; 7

Gly Asn Xaa Xaa Cys Gly Gly Cys Gly  
1 5

&lt;210&gt; 8

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: where X  
denotes a known combination of the two bases at  
DNA positions 4X and 5X and there is equal  
probability of any of the four bases at DNA position 3

&lt;220&gt;

&lt;221&gt; BINDING

&lt;222&gt; (1)..(9)

&lt;400&gt; 8

Gly Asn Xaa Xaa Cys Gly Gly Cys Gly  
1 5

&lt;210&gt; 9

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: where X  
denotes a known combination of the two bases at  
DNA positions 4X and 5X

&lt;220&gt;

<221> BINDING  
<222> (1)..(9)

<400> 9  
Gly Cys Xaa Xaa Cys Gly Gly Cys Gly  
1 5

<210> 10  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Zinc finger  
binding protein

<220>  
<221> BINDING  
<222> (1)..(28)

<400> 10  
Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Asp Arg Ser Ser Leu  
1 5 10 15

Thr Arg His Thr Arg Thr His Thr Gly Glu Lys Pro  
20 25

<210> 11  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Zinc finger  
binding protein

<220>  
<221> BINDING  
<222> (1)..(28)

<400> 11  
Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Asp Arg Ser His Leu  
1 5 10 15

Thr Arg His Thr Arg Thr His Thr Gly Glu Lys Pro  
20 25

<210> 12  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Zinc finger

binding protein

<220>

<221> BINDING

<222> (1)..(27)

<400> 12

Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Asp Arg Ser Asn Leu  
1 5 10 15

Thr Arg His Thr Arg Thr His Thr Gly Glu Lys  
20 25

<210> 13

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Zinc finger  
binding protein

<220>

<221> BINDING

<222> (1)..(9)

<400> 13

Ala Gly Ala Gly Ala Gly Cys Thr Cys  
1 5

<210> 14

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: 8bp  
palindromic sequence which is bound and cleaved by  
the restriction endonuclease NotI

<220>

<221> BINDING

<222> (1)..(8)

<400> 14

Gly Cys Gly Gly Cys Cys Gly Cys  
1 5

<210> 15

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: zinc finger  
binding protein

<220>

<221> BINDING

<222> (1)..(9)

<400> 15

Gly Cys Gly Gly Cys Cys Gly Cys Gly  
1 5

<210> 16

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: NotI  
recognition sequence

<220>

<221> BINDING

<222> (1)..(8)

<400> 16

Gly Cys Gly Gly Cys Cys Gly Cys  
1 5

<210> 17

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Amino acid at  
position 5 may be Cys or ThrT

<220>

<221> BINDING

<222> (1)..(9)

<400> 17

Gly Cys Gly Gly Tyr Cys Gly Cys Gly  
1 5